

What is claimed is:

1. A tissue ablation system, comprising:
one or more ablation probes;
an alignment device configured to be fixed relative to targeted tissue, the alignment
5 device comprising a surface and a plurality of apertures through which the one or more
ablation probes can be guided, the plurality of apertures spaced apart along the surface.
2. The system of claim 1, wherein the alignment device is configured to be
adhered to a patient.
3. The system of claim 1, wherein the alignment device is disk-shaped.
- 10 4. The system of claim 1, wherein the spacing between the apertures is fixed.
5. The system of claim 1, wherein the spacing between the apertures is
adjustable.
6. The system of claim 1, wherein the spacing between the apertures is uniform.
7. The system of claim 1, wherein the apertures are indexed from each other in a
15 two-dimensional plane.
8. The system of claim 1, wherein the apertures are indexed from each other in
three-dimensional space.
9. The system of claim 1, wherein the plurality of apertures comprises a central
aperture and remaining apertures that are placed in a plurality of concentric rings around the
20 central aperture.
10. The system of claim 1, wherein the apertures have axes that are parallel to
each other.
11. The system of claim 1, wherein the apertures have axes that are non-parallel to
each other.
- 25 12. The system of claim 1, wherein the surface is flat.

13. The system of claim 1, wherein the alignment device comprises one or more bosses associated with a respective one or more of the plurality of apertures, wherein the one or more bosses limits the distance that the one or more ablation probes can be guided through the one or more apertures.

5 14. The system of claim 13, wherein the one or more bosses is removably mounted to the one or more apertures.

15. The system of claim 13, wherein the one or more bosses is permanently mounted to the one or more apertures.

10 16. The system of claim 13, wherein the one or more bosses comprises a plurality of bosses.

17. The system of claim 16, wherein the bosses have differing lengths.

18. The system of claim 1, wherein the alignment device comprises one or more recesses associated with a respective one or more of the plurality of apertures, wherein the one or more recesses extends the distance that the one or more ablation probes can be guided
15 through the one or more apertures.

19. The system of claim 18, wherein the recesses have differing depths.

20. The system of claim 18, wherein the alignment device comprises one or more inserts associated with a respective one or more recesses, wherein the insert is removably mounted.

20 21. The system of claim 1, wherein each of the one or more ablation probes is a radio frequency (RF) ablation probe.

22. The system of claim 1, wherein the one or more ablation probes comprises a plurality of ablation probes.

23. A method for performing a compound ablation in the body of a patient,
25 comprising:

affixing an alignment device relative to targeted tissue;

guiding an ablation probe within a first aperture in the alignment device to place the ablation probe adjacent the targeted tissue in a first region;

operating the ablation probe to create a first lesion in the first region;

5 guiding the ablation probe within a second different aperture in the alignment device to place the ablation probe adjacent the targeted tissue in a second region; and

operating the ablation probe again to create a second lesion in the second region.

24. The method of claim 23, further comprising completely removing the ablation probe from the first aperture prior to guiding the first ablation probe within the second
10 aperture.

25. The method of claim 23, wherein alternate guiding and operating of the ablation probe is performed for a plurality of regions until the entire target tissue is ablated.

26. The method of claim 23, wherein the ablation probe is guided within the first and second apertures in parallel directions.

15 27. The method of claim 23, wherein the ablation probe is guided within the first and second apertures in non-parallel directions.

28. The method of claim 23, wherein the alignment device comprises a boss or a recess associated within the first aperture, the method further comprising modifying a distance that the ablation probe is guided within the first aperture by abutting a portion of the
20 ablation probe against the boss or recess.

29. The method of claim 23, wherein the ablation probe is operated by generating RF energy to create the first and second lesions.

30. The method of claim 23, wherein the ablation probe is placed in contact with the first and second regions of the target tissue.

31. The method of claim 23, wherein the ablation probe is embedded with the first and second regions of the target tissue.

32. The method of claim 23, wherein the target tissue is inside the body of the patient.

5 33. The method of claim 23, wherein the ablation probe is percutaneously guided within the first and second apertures into the body of the patient.

34. The method of claim 23, wherein the target tissue is a tumor.

35. A method for performing a compound ablation in the body of a patient, comprising:

10 affixing an alignment device relative to targeted tissue;

guiding a plurality of ablation probes within a respective plurality of apertures in the alignment device to place the ablation probes adjacent the targeted tissue in a plurality of regions;

operating the ablation probes to create a plurality of lesions in the plurality of regions.

15 36. The method of claim 35, wherein the plurality of ablation probes are operated by transmitting RF energy between at least two of the ablation probes.

37. The method of claim 35, wherein the entire target tissue is ablated.

38. The method of claim 35, wherein the ablation probes are guided within the plurality of apertures in parallel directions.

20 39. The method of claim 35, wherein the ablation probes are guided within the plurality of apertures in non-parallel directions.

40. The method of claim 35, wherein the alignment device comprises one or more bosses or recesses associated within one or more of the plurality of apertures, the method further comprising modifying a distance that one or more of the ablation probes are guided

within the one or more plurality of apertures by abutting a portion of the one or more ablation probes against the one or more bosses or recesses.

41. The method of claim 40, wherein the one or more bosses comprises a plurality of bosses.

5 42. The method of claim 41, wherein the bosses have differing lengths.

43. The method of claim 40, wherein one or more apertures is associated with one or more inserts, wherein one or more inserts are removably mounted.

44. The method of claim 35, wherein the ablation probes are operated by generating RF energy to create the plurality of lesions.

10 45. The method of claim 35, wherein the ablation probes are placed in contact with the plurality of regions of the target tissue.

46. The method of claim 35, wherein the ablation probes are embedded with the plurality of regions of the target tissue.

15 47. The method of claim 35, wherein the target tissue is inside the body of the patient.

48. The method of claim 47, wherein the ablation probes are percutaneously guided within the plurality of apertures into the body of the patient.

49. The method of claim 35, wherein the target tissue is a tumor.

20 50. An alignment device for one or more ablation probes, comprising:

a surface;

a plurality of apertures, through which the one or more ablation probes can be guided, wherein the plurality of apertures are spaced apart along the surface; and

one or more bosses or recesses associated with a respective one or more of the plurality of apertures, wherein the one or more bosses or recesses modifies the distance that
25 the one or more ablation probes can be guided through the one or more apertures.

51. The device of claim 50, wherein the alignment device is configured to be adhered to a patient.
52. The device of claim 50, wherein the alignment device is disk-shaped.
53. The device of claim 50, wherein the spacing between the apertures is fixed.
- 5 54. The device of claim 50, wherein the spacing between the apertures is adjustable.
55. The device of claim 50, wherein the spacing between the apertures is uniform.
56. The device of claim 50, wherein the apertures are indexed from each other in a two-dimensional plane.
- 10 57. The device of claim 50, wherein the apertures are indexed from each other in three-dimensional space.
58. The device of claim 50, wherein the plurality of apertures comprises a central aperture and remaining apertures that are placed in a plurality of concentric rings around the central aperture.
- 15 59. The device of claim 50, wherein the apertures have axes that are parallel to each other.
60. The device of claim 50, wherein the apertures have axes that are non-parallel to each other.
61. The device of claim 50, wherein the surface is flat.
- 20 62. The device of claim 50, wherein the one or more bosses or recesses comprises one or more bosses that limit the distance that the one or more ablation probes can be guided through the one or more apertures .
63. The device of claim 50, wherein the one or more bosses is removably mounted to the one or more apertures.

64. The device of claim 50, wherein the one or more bosses is permanently mounted to the one or more apertures.

65. The device of claim 50, wherein the one or more bosses or recesses comprises one or more recesses that extend the distance that the one or more ablation probes can be
5 guided through the one or more apertures.

66. The device of claim 50, wherein the one or more bosses or recesses comprises one or more bosses and one or more recesses.

67. The device of claim 50, wherein the one or more bosses or recesses comprises a plurality of bosses or recesses.

10 68. The device of claim 67, wherein the plurality of bosses or recesses have differing lengths.

69. The device of claim 50, wherein the one or more recesses is associated with one or more inserts removably mounted in the associated one or more recesses.

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